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ABSTRACT

The Anthropology Curriculum Study Project (ACSP) has developed a research model which is to be used to provide data for effective implementation of the ACSP course, "Patterns in Human History". The common "means-ends" model for research, which relies on one-way effects, is described and rejected in favor of an interactive, "transactional" model. The introduction of new curricula is construed as a process of intervention, altering the teacher's cognitive map and thereby his patterns of teaching, and learning behavior. This research strategy is discussed as an attempt to identify and map the expressive behaviors of teachers and students as they interact in the classroom; to analyze these persistant patterns in terms of data about the psycho-cultural orientations of individuals; and, to relate these orientations to the school as a social system. The data included are: perception of self, perceptions of others, personality structure, and perceptions of process. Responses to external intervention are understood through the analysis of the interrelationship of these variables. This model is to be used also in assessing the curriculum materials, various teaching styles, and patterns of learning behavior (cognitive processes) in terms of the course behavioral objectives. The components of the ACSP Research Program are enumerated. (SBE)

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CONCEPTUAL STRUCTURE FOR RESEARCH ON CURRICULUM IMPLEMENTATION

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ACSP OBJECTIVES AND CURRICULUM

The Anthropology Curriculum Study Project (ACSP) is a curriculum development and research program operating under the auspices of the American Anthropological Association and funded by a grant from the National Science Foundation. The general objective of the ACSP is to "affect the content and methodology of secondary social studies curricula in ways which will increase students' understanding of social behavior, improve their ability to see themselves and human life in broad perspective, and increase their skills of disciplined observation and analysis of social phenomena".[2] In addition to preparing numerous high school units and readings in selected areas of anthropology and bibliographies of anthropological resource materials suitable for school use, the project has developed a semester course in World History for 10th grade students. The course, called PATTERNS IN HUMAN HISTORY, is currently being taught to approximately 1300 pupils in six Oakland, California, high schools and two Stockton, California, high schools. A commercially produced version of the course is being published by MacMillan Company and should be available late this year. ACSP course designers intended that PATTERNS IN HUMAN HISTORY be usable with the majority of American high school students.

PATTERNS IN HUMAN HISTORY differs from many high school courses in social

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studies in a number of ways:

(a) it is designed to concentrate student attention on the study of human social behavior;

(b) it is designed to teach students specific concepts, principles, and related terminology from the field of anthropology and other behavioral science disciplines;

(c) it is designed to teach students methods for observing, categorizing, and further analysing social behavior; these methods involve the application of behavioral science concepts and principles in collecting and processing social data;

(d) it is designed to produce changes in what students can do; it attempts to alter student capabilities and promote the transfer of intellectual skills to new situations occurring after instruction where analysis of social behavior is desirable and appropriate;

(e) it is designed to affect pupils' value orientations regarding cultures other than their own and thus broaden their cultural perspectives;

(f) to accomplish the above objectives, the course has been designed to engage pupils often in the processing of various kinds of social data and provides repeated experience in describing and patterning data, drawing inferences, formulating and testing hypotheses, and distinguishing "objective" and "subjective" approaches to the description and analysis of human behavior.

The types of pupil and teacher interactions emphasized in PATTERNS IN HUMAN HISTORY and its accompanying teaching manual differ pointedly from traditional classroom patterns in which teachers transact the role of "knowledge-imparters", while pupils transact the role of passive "knowledge-receivers". In contrast, the course and its accompanying teaching manual stress the importance of discussion and the active examination of evidence by pupils during class, and clearly places on the teacher the responsibility for fostering changes in the structure of traditional teacher-pupil, pupil-pupil classroom interactions.

RESEARCH OBJECTIVES

Systematic research activities connected with PATTERNS IN HUMAN HISTORY began in the fall of 1969. The objectives of the research component of ACSP are to assess the impact of the course on pupils and teachers, and thus provide data useful in revision and elaboration of pupil materials and the teaching manual, and in designing strategies for effective future course implementation.

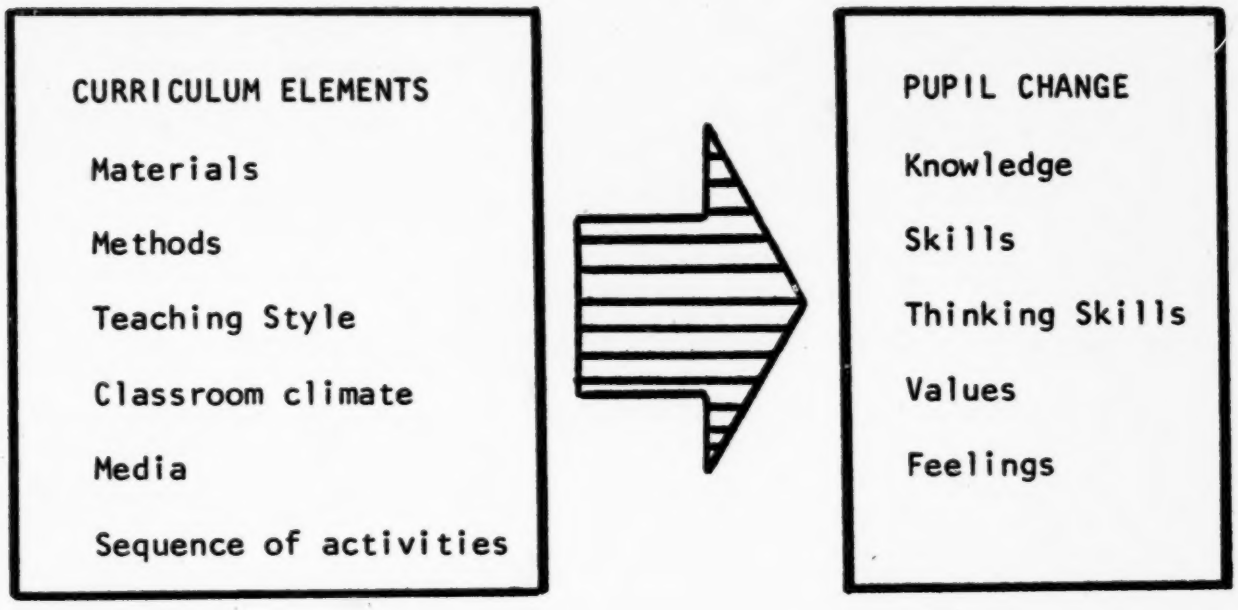
The type of course involved, with its multiple goals in the areas of developing data analyzing capabilities and altering pupil value orientations, and its emphasis on the importance of altered patterns of teacher and pupil classroom behavior, requires a comprehensive plan for researching course outcomes and for formulating effective implementation strategies.

MEANS-ENDS CONCEPTUAL MODEL

The conceptual model most frequently used for deriving research strategies in social sciences education, as well as in most other school subjects, can be referred to as a "means-ends" model. Educational outcomes - that is, changes in pupils - are conceived as ends or objectives to be achieved; curriculum elements are identified - either singly, in combination, or in interactions with various pupil characteristics - as the means which can potentially produce the intended or anticipated results. Figure 1 is a representation of the "means-ends" model.

Figure 1

Means-Ends Model for Explaining Curriculum Effects



Both the means ("CURRICULUM ELEMENTS") and ends ("PUPIL CHANGE") components of Figure 1 are incomplete in the sense that variations in the model have produced even more distinct elements of curriculum and pupil characteristics than those indicated. The large arrow represents the general relationship of causality between means and ends and further includes conceptual components that identify more specific mechanisms by means of which a selected curriculum

element (or elements) potentially produces some change in pupils. Sophisticated research strategies based upon a "means-ends" model may identify complex combinations of interacting curriculum elements and test their actual relationship to single-level or multi-level objectives through the comparison of results from an appropriate set of treatments.

A means-ends conceptual model for explaining curriculum effects would appear to be highly useful in deriving studies for assessing the appropriateness of such things as various teaching styles, instructional sequences, course materials, and teaching strategies to the attainment of a great range of educational objectives. A variation of the model has led to series of studies which have served to identify hierarchies of simple to complex capabilities underlying the attainment of high level intellectual capabilities.

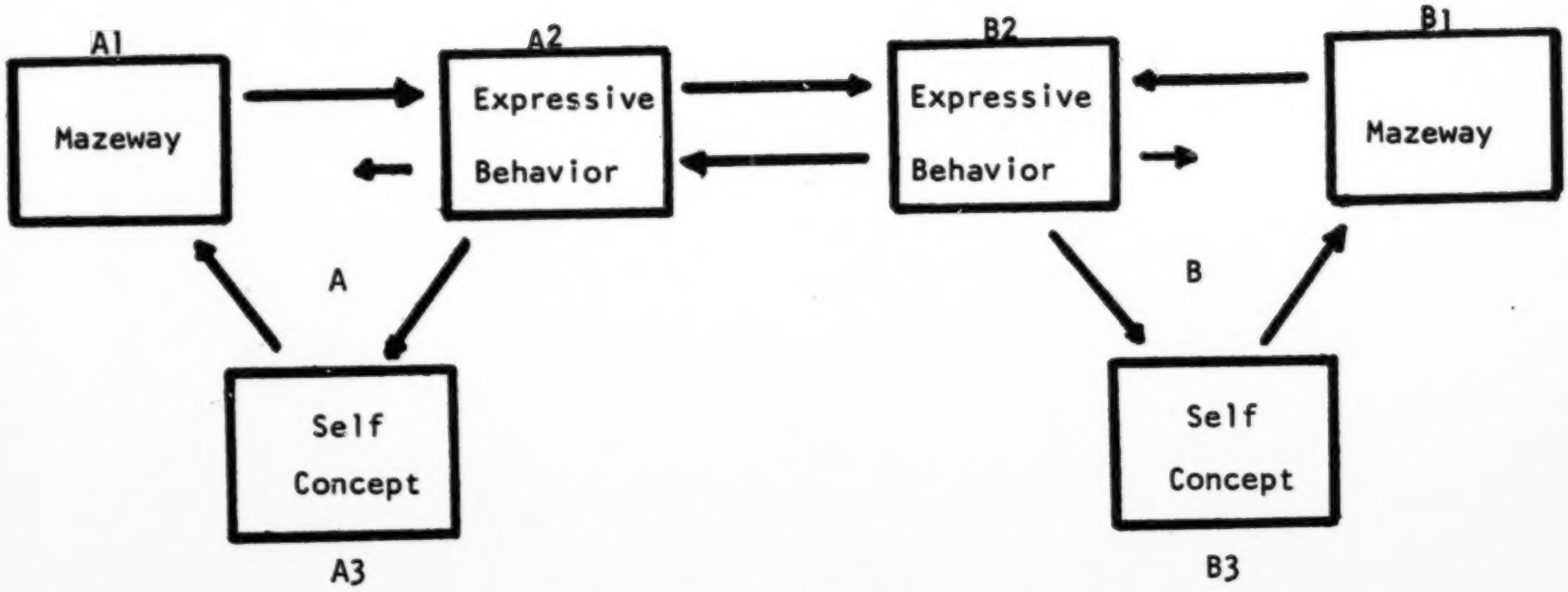
INADEQUACIES OF MEANS-ENDS MODEL

Despite the usefulness of a "means-ends" conceptual model in assessing the appropriateness of curriculum elements to changes in pupils, such a model is inadequate for deriving comprehensive research plans which will yield data useful in formulating curriculum implementation strategies. The means-ends framework, in which curriculum elements are means and changes in pupils the ends, offers little assistance in formulating effective steps in introducing new curricula into ongoing school situations and insuring that appropriate curriculum elements are in fact instituted. This inadequacy is due to the fact that a means-ends model is not concerned with the processes through which "means" become instituted but begins with these as "givens" in a conceptual configuration of causal relationships. Derived studies do not, therefore, investigate strategies of curriculum change in ongoing situations because the model, though dynamic with respect to the relationship between curriculum elements and instructional goals, is static

with respect to variables affecting curriculum implementation. In experimental studies derived from a means-ends model the experimenter insures that the selected means are in fact initially present in the experimental situation. A more encompassing and comprehensive model is necessary for deriving a research strategy for studying the factors which influence curriculum implementation in schools, a model which does not abandon the investigation of appropriate means to instructional ends, but incorporates such inquiry within a total explanatory framework dealing with curriculum change. With respect to the ACSP curriculum, the conceptual model used for deriving a comprehensive research plan would have to be one ultimately useful in the formulation of implementation strategies which lead to appropriate changes in the interactive classroom behavior of teachers and pupils.

The ACSP Research Project is based upon a conceptual model which views the school as a system of individuals who, in the course of their interactions, transact patterns of meaning which become part of each individual's psychological makeup and are expressed in persisting forms of behavior which then constitute the elements of the socio-cultural structure of the school. This conceptual model attempts to represent the nature and dynamics of psychological processes, expressive behaviors, and interpersonal relationships as they integrate into a functional psycho-cultural system. These factors may be represented as follows:

Figure 2



TRANSACTIONAL MODEL

Figure 2 is a schematic representation of a transactional system evolving within a dyadic relationship consisting of Person A and Person B. Looking at the left half of Figure 2, we note a 3-cell configuration which represents the intra-personal dynamics of Person A as he participates in the dyad. This person (as do all humans) has in his mind an image structure of things, events, persons, and processes which is relatively organized and integrated. This structure may be called a mazeway (c.f. Anthony Wallace, Culture and Personality); it is the conceptual structure in terms of which Person A conceives of himself and his world. Further, this conceptual structure includes images concerned with how things happen, and how Person A fits in as an element in these actions. These images of process control the form and consistency of Person A's expressive behavior. The arrow between Cell A-1 and Cell A-2 in the figure represents the

fact that Person A's expressive behavior is the overt manifestation of his mazeway. The arrow from A-2 back to A-1 represents the fact that Person A is aware of his expressive behaviors and that this awareness tends to reinforce the psychological structure on which the expressive behavior depends. Person A conceives of the world in certain ways. He structures his behaviors in terms of these conceptsions; he perceives his own behavior and organizes his perception in terms of his mazeway. Thus there is an established reciprocal reinforcement between the structure of our perceptions and what we perceive through our actions.

Cell A-3 in in Figure 2 represents that portion of Person A's mazeway which pertains to the definition of "self". The differentiation of self from the mazeway configuration indicated by Figure 2 is for purposes of discussion and should not convey the idea that self-concept and mazeway are conceptually distinct. Cell A-3 calls attention to the relationship between the expressive behavior of the individual and the dynamics of self-definition. In order to discuss this dynamic, it is necessary to discuss two types of a situation in which Person A acts. In the first type of situation Person A is acting alone. He is perceiving his actions and organizing his perceptions in terms of his mazeway. This perception of his own action is part of a dynamic self-definition in which Person A is referring to the expectations of absent others, remembered or anticipated, and which he is applying as an evaluative criteria to his own behaviors. The expectations of absent others may be internalized by the individual and become part of his own system of directive constraints, or it may be responded to as an expected external force. Even when Person A is acting alone, he is acting in relation to his knowledge of others. His own repertoire of behaviors is conditioned by the knowledge he has of others, of their behaviors and reactions

to what he may do. When acting alone, Person A's decisions depend largely on what knowledge he has of others, since he cannot check through immediate observation. When he is acting with others, his knowledge may be altered and redefined., whether he likes it or not, as we see in the second type of situation.

In the second type of situation, Person A is interacting with another person (Person B). His own actions are the expression of his mazeway. At the same time his actions create a situation to which Person B responds, and Person B's responses, in turn, influence the further action of A. As this reciprocal process of action proceeds, A is continuously validating and/or revising his concept of self (and his mazeway map of his world), according to the inputs resulting from the actions of B. The same process of action and self-definition occurring with A alone, occurs mutually as A and B continue to interact and to influence the extension or alteration of one another's mazeway; they are said to be involved in a process of <u>interaction</u>. If Person A's mazeway differs radically from Person B's (that is, their pictures of the world are at odds), then one's behavior will contradict the assumptions of the other. What A means by his actions will be contradictory to B's structure of meanings. If this contradiction is extreme, and the interaction continues, open conflict may result. On the other hand, if A and B's behaviors are mutually acceptable and comprehensible, then we say that there is a degree of equivalency between their mazeways. To the extent to which each person's mazeway elaboration represents equivalency in meaning, then we say that A and B are transacting. It is through this process of transaction that A and B develop the persistent forms of interaction that we call social structure.

The transactional model which has been briefly sketched above is appropriate

to the analysis of the behavior of a single person, the reciprocal relationships between two persons, or the relationships among members of a large group. The critical feature of the model is the emphasis upon the dynamic relationship between mazeway and expressive behavior as this is developed through transaction with others. What this model tells us is that in order to intervene in expressive behavior we must intervene in the mazeway of which it is the overt active manifestation. This suggests that to effect real changes in the expressive behavior of a teacher we must do more than prescribe new procedures. We must devise means to alter the teacher's cognitive map so as to minimize the process in reinterpretation and optimize the teacher's internalization of the new procedures into a restructured set of images of his world. He has to <u>see</u> the world in new ways before he can consistently <u>act</u> in new ways. The transactional model also tells us that if we wish to intervene in the expressive behaviors of a group we must make certain to alter the mazeways of those persons in the group who occupy positions of power or leadership since it is their behaviors which set salient conditions to which the remaining members of the group respond. A teacher, for example, interacts with many persons and classes of persons within the school. In each dyadic relationship he may transact somewhat variant patterns of meaning and expectation. These variations lead to differing structures of behavior in each dyad. Some of the persons with whom he interacts, however, have more fate control, behavior control or personal significance for him than do others. To such persons he is especially responsive and may organize his own perceptions and behaviors in such a way that they in turn effect those of still other members of the group. The teacher, then, may be responding to pupils in ways that he anticipates will be approved of by other teachers, parents, principals, etc. The transactional model tells us that interventions in the

system of transacted meanings and behaviors between teacher and pupils requires or entails similar intervention into the meanings and behaviors transacted between teachers and principals, teachers and parents, etc. While the conceptual model makes it clear that one can intervene in the behaviors of the group leaders through making a prior intervention into the group members, it also suggests that the more efficient intervention will be made in the mazeway behavior system of the leadership figures.

In terms of the transactional model, a school or classroom is conceived as dynamic system of transacted meanings and persisting forms of interactive behavior. Such a model dictates that the introduction of new curricula which require altered patterns of teaching and altered patterns of learning behavior of students must be construed as a process of <u>intervention</u> and must be researched as such. To determine the effects of any curriculum intervention requires analyses of both expressive behaviors and mazeway structures of the persons involved. To determine the potential effect of a planned intervention, one must determine:

(a) how the persons to be changed conceive and perceive their world;

(b) how they express those conceptions in behavior;

(c) the extent to which the expressive behaviors of the persons involved function to maintain existing mazeway structures, and

(d) the extent to which this is organized into a dynamic and integrated pattern.

The greater degree of patterning, the more likely that both expressive behavior and mazeway are resistant to change. In such situations, intervention at the behavioral level only tends to be ineffective.

The ACSP Research Program is an attempt to identify and map socio-cultural and psycho-cultural variables which are activated by the introduction of a totally new curriculum into established system of behaviors (school and classroom). The ACSP research strategy involves mapping of expressive behaviors of teachers and students as they interact in the classroom. It also involves mapping the persisting patterns of interaction between teacher-teacher, teacher-principal, pupil-principal, etc., and analysis of these patterns in terms of other data about the psycho-cultural orientations of individuals within these dyadic relationships. The psycho-cultural data include data on perception of self, perceptions of others, personality structure, and perceptions of process. The focus of analysis throughout the research program is upon the nature of the interrelationship among these various classes of variables as a means to understanding responses to external intervention.

COMPONENTS OF RESEARCH STRATEGY

The major function of the present and proposed research phases of ACSP activity is to provide data for use in future effective implementation of the ACSP course, PATTERNS IN HUMAN HISTORY. For this purpose, two separate yet related lines of inquiry are being pursued:

1. Identification and investigation of the variables and interaction among variables that determine the extent to which the course is implemented at levels that in fact impinge upon pupil learning behavior. Major objectives here include mapping the psycho-cultural orientations of project teachers, tracing the effect of these orientations on interactions with pupils,

and relating these orientations to elements of the school as a social system.

2. Assessment of the appropriateness of the ACSP materials (including the Teaching Manual), various teaching styles, and various patterns of learning behavior, to the attainment of the learning objective of the ACSP course by pupils with differing initial capabilities, value orientations, and personality configurations.

The first of these two lines of investigation will supply data requisite to the formulation of intervention strategies which can insure future course implementation at levels that genuinely affect pupils. The second line of research activity will provide data requisite to any revision, elaboration, or supplementation of pupil and teacher materials, sequences of recommended classroom activities, and techniques for assisting new teachers to develop effective teaching styles. Five major research components have been devised.

Components I and II are mainly concerned with the first line of inquiry indicated above and include ethnographic studies of the social systems of selected schools and the psycho-cultural orientations of teachers, the assignment of four combinations of ACSP assistance to sets of "ethnically mixed" and predominantly "white" schools, and the assessment of the impact of differentiated assistance on teachers and the social organization of the schools. ACSP intervention "treatments" will consist of varying types and numbers of workshops and the use of a guided self-analysis system in which teachers code their own teaching behavior from video taped lessons.

The second major line of inquiry indicated above consists of research components III, IV, and V. Component III seeks to identify the various

capabilities underlying successful performance of the terminal objectives of the course; that is, what pupils must be able to do before they can successfully process social data by recognizing patterns, comparing and contrasting, drawing inferences, generating and testing hypotheses. A series of three related studies involve identification of terminal and requisite skills, testing of a relatively small number of individual pupils, and intensive teaching of these same pupils using two different instructional strategies. These studies will serve to identify pupil capabilities which the curriculum itself must establish before students can be expected to attain the course's cognitive goals.

Component IV consists of a comparison at the beginning and end of each school year of the performance of project and control pupils on tests of cognitive capabilities and projective instruments for assessing behavioral "sets". The instruments used will be progressively refined and elaborated to incorporate the findings from component III. A standard personality inventory and values inventory will be administered to project pupils in order to determine the degree to which course success is related to certain personality configurations and value orientations.

Component V will use analyses of videotaped lessons to group teachers into categories based on teaching style in order that relationship between teaching style and performance (obtained from the testing in component IV), and possible interactions among teaching styles, personality variables, and value orientations, can be investigated.

In general, the overall research strategy begins with the present year of course installation, instrumentation development, baseline data gathering, and preliminary studies. This would be followed by a one-and-one-half year

period of "treatment" installation and observation of effects; plus a final period for data integration, synthesis, and reporting.

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2] Anthropology in Secondary Social Studies: Research on the Effects of Course Implementation. Proposal for Continuation and Completion of Current NSF Project. ACSP, Berkeley; Jan. 1970. Page 1.

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CHART I

SUMMARY OF RESEARCH DESIGN COMPONENTS

Design Component	Description	Research Activity		
		1969-70	1970-71	1971-72
I	Different combinations of ACSP interventions are assigned to groups of schools similar in ethnic composition to determine the relative impact of the combinations on: elements of schools as social systems; teachers' value perceptions and teaching styles.	Gathering of baseline data; development of instrumentation. Ethnographic study of a school.	Introduction of ACSP intervention combinations; assessment of impact.	Modification of ACSP intervention combinations; assessment of impact.
II	One combination of ACSP interventions with predicted high potential for affecting teaching style is used with a group of teachers from different schools to determine the impact on their teaching styles and on the corresponding classroom behavior of pupils.	Development of instrumentation. Pilot study.	Introduction of treatment; assessment of impact.	-
III	Identification of capabilities requisite to the performance of terminal learning objectives; these are requisites that course must establish.	Experimental study related to one selected learning objectives.	Experimental study related to another selected learning objective.	Experimental study related to another selected learning objective.
IV	Comparison of performance of project and non-project pupils on tests of cognitive capabilities and projective instruments for assessing behavioral "sets".	Development of instrumentation; first pre-post testing.	Pre-post testing. Refinement of instrumentation.	Pre-post testing.
V	Teachers are grouped into categories based on teaching style; changes in cognitive capabilities of students taught with different teaching styles are then compared to determine whether certain styles are more conducive to the attainment of learning objectives.	Categorization of teaching styles; compare with post test data from IV.	Continuation of 1969-70 with wider range of teaching styles.	Continuation of 1970-71 with wider range of teaching styles.